

To: McClintock, Katie[McClintock.Katie@epa.gov]
From: Narvaez, Madonna
Sent: Thur 2/11/2016 6:04:05 PM
Subject: FW: Request for MSDS Copies
Brosnan Refractories-Handbook.pdf

fyi

-----Original Message-----

From: Fairchild, Susan
Sent: Thursday, February 11, 2016 5:17 AM
To: Narvaez, Madonna <Narvaez.Madonna@epa.gov>
Subject: RE: Request for MSDS Copies

Madonna,

IN GENERAL, the refractories that led to the highest emissions had more than 50% chromium content.

However, some furnaces having high chromium refractories had low chromium emissions, due to a number of factors including furnace design, glass 'recipe', raw mineral content of the melt, and refractory design by manufacturer.

I'm attaching an article that explains in depth how the refractory degradation process happens.

We regulated based on emissions, not on refractory, due to these issues which would have needed a research project or two to really begin to understand fully.

Susan Fairchild
Senior Environmental Scientist
(919) 541-5167

USPS Address:
OAQPS/SPPD/MMG
Mail Code D 243-04
Research Triangle Park, NC 27711

-----Original Message-----

From: Narvaez, Madonna
Sent: Wednesday, February 10, 2016 3:55 PM
To: Fairchild, Susan <Fairchild.Susan@epa.gov>
Subject: FW: Request for MSDS Copies

Susan, do you know of any data or information about how much chromium in the refractory could lead to high chromium emissions? Thanks!

-----Original Message-----

From: Bray, Dave
Sent: Wednesday, February 10, 2016 12:16 PM
To: Wroble, Julie <Wroble.Julie@epa.gov>; Narvaez, Madonna <Narvaez.Madonna@epa.gov>; McClintock, Katie <McClintock.Katie@epa.gov>; Koprowski, Paul <Koprowski.Paul@epa.gov>; Hedgpeth, Zach <Hedgpeth.Zach@epa.gov>
Subject: RE: Request for MSDS Copies

The MSDS sheets don't say that there is no chromium, only that any chromium, if there, would be 1% or less of the total by weight.

Ex. 5 - Deliberative Process

Sounds like some more research is needed here.

Dave

From: Wroble, Julie
Sent: Wednesday, February 10, 2016 12:03 PM
To: Bray, Dave; Narvaez, Madonna; McClintock, Katie; Koprowski, Paul; Hedgpeth, Zach
Subject: RE: Request for MSDS Copies

Ex. 5 - Deliberative Process

-----Original Message-----

From: Bray, Dave
Sent: Wednesday, February 10, 2016 11:55 AM
To: Wroble, Julie <Wroble.Julie@epa.gov>; Narvaez, Madonna <Narvaez.Madonna@epa.gov>; McClintock, Katie <McClintock.Katie@epa.gov>; Koprowski, Paul <Koprowski.Paul@epa.gov>; Hedgpeth, Zach <Hedgpeth.Zach@epa.gov>
Subject: RE: Request for MSDS Copies

The chromium comes from the refractory material used to line the furnaces. It's not a raw material used in the formulation of the art glass.

Lead is used in the manufacturing of the glass so lead chromate could be a compound that is emitted.

Dave

From: Wroble, Julie
Sent: Wednesday, February 10, 2016 11:41 AM
To: Narvaez, Madonna; McClintock, Katie; Koprowski, Paul; Bray, Dave; Hedgpeth, Zach
Subject: RE: Request for MSDS Copies

Ex. 5 - Deliberative Process

From: Narvaez, Madonna
Sent: Wednesday, February 10, 2016 11:40 AM
To: McClintock, Katie <McClintock.Katie@epa.gov>; Wroble, Julie <Wroble.Julie@epa.gov>; Koprowski, Paul <Koprowski.Paul@epa.gov>; Bray, Dave <Bray.Dave@epa.gov>
Subject: FW: Request for MSDS Copies
Importance: High

Ex. 5 - Deliberative Process

From: GRUNOW Greg [mailto:GRUNOW.Greg@deq.state.or.us]
Sent: Wednesday, February 10, 2016 11:01 AM
To: Narvaez, Madonna <Narvaez.Madonna@epa.gov<mailto:Narvaez.Madonna@epa.gov>>
Subject: FW: Request for MSDS Copies

Hi Madonna,

Bullseye got back to me on their refractory materials and it appears they do not contain chromium.

Greg Grunow
Natural Resource Specialist
ODEQ Northwest Region
503-229-5690
grunow.greg@deq.state.or.us<mailto:grunow.greg@deq.state.or.us>

From: Eric Durrin [mailto:ericdurrin@bullseyeglass.com]
Sent: Tuesday, February 09, 2016 5:55 PM
To: GRUNOW Greg
Cc: Max Miller
Subject: RE: Request for MSDS Copies

Hello,

I checked with our maintenance department. We currently use two materials for our tank liners: Monofrax CS-3, and VC40-Chamotte. Chromium is not shown on the material specification documents for these building materials.

Regards,

Eric Durrin | Bullseye Glass Co. | 503-232-8887x103